

In the Claims

1. (Currently Amended) A method for minimizing the Inter-Document Zone (IDZ) in multi-pass printing system architectures with print engines employing asynchronous paper delivery; and providing control over paper feed and imaging times comprising:

- a) receiving input electronic data of an image intended to be printed;
- b) inspecting said data to determine ~~both the~~ a lead edge (L.E.) ~~and the trail edge (T.E.)~~ blank borders of said image; and
- c) on a page by page basis determining whether said blank borders exceeds a minimum design distance and adjust imaging and paper delivery timing accordingly to increase subsequent printing speed.

2. (Currently Amended) The method of claim 1 wherein when the L.E. blank borders exceeds the minimum design distance, the images corresponding to that page are printed sooner than nominally.

3. (Currently Amended) The method of claim 1, further comprising:
- d) inspecting said data to determine a trail edge (T.E.) blank border of said image; and
 - e) on a page by page basis determining whether said blank borders exceed a minimum design distance and adjust imaging and paper delivery timing accordingly to increase subsequent printing speed such that when ~~where~~ the T.E. blank borders exceeds the minimum design distance, the image corresponding the subsequent document are printed sooner than nominally.

4. (Currently Amended) The method of claim 3 ~~4~~ wherein when the T.E. blank borders exceeds the minimum design distance, any transition events timing is performed sooner than nominally.

5. (Previously Presented) A method for managing a size of an inter-document zone in a printing system having an imaging subsystem and a recording medium transport subsystem, the printing system executing transition events, comprising:

identifying a leading edge non-image zone of an electronic image to be rendered, the electronic image to be rendered having a plurality of scanlines, each scanline containing a plurality of pixels of image data, the leading edge non-image zone being a portion the electronic image from a first scanline of the electronic image to a scanline of the electronic image immediately preceding a scanline of the electronic image having first renderable image data;

determining a length of the leading edge non-image zone, the length being orthogonal to a direction of a scanline of the electronic image;

comparing the length of the leading edge non-image zone to a predetermined value; and

adjusting a timing of an imaging process executed by the imaging subsystem when the length of the leading edge non-image zone exceeds the predetermined value.

6. (Previously Presented) The method as claimed in claim 5, wherein the timing of the imaging process is adjusted on a page by page basis.

7. (Previously Presented) The method as claimed in claim 5, further comprising:

adjusting a timing of a recoding medium delivery process executed by the recording medium transport subsystem when the length of the leading edge non-image zone exceeds the predetermined value.

8. (Previously Presented) The method as claimed in claim 7, wherein the timing of the recoding medium delivery process is adjusted on a page by page basis.

9. (Previously Presented) The method as claimed in claim 5, further comprising:
identifying a trailing edge non-image zone of an electronic image to be rendered, the trailing edge non-image zone being a portion the electronic image from a last scanline of the electronic image to a scanline of the electronic image immediately following a scanline of the electronic image having last renderable image data; and
adjusting a timing of an imaging process executed by the imaging subsystem when the length of the trailing edge non-image zone exceeds the predetermined value.

10. (Previously Presented) The method as claimed in claim 9, wherein the timing of the imaging process is adjusted on a page by page basis.

11. (Previously Presented) The method as claimed in claim 9, further comprising:
adjusting a timing of a recoding medium delivery process executed by the recording medium transport subsystem when the length of the trailing edge non-image zone exceeds the predetermined value.

12. (Previously Presented) The method as claimed in claim 11, wherein the timing of the recoding medium delivery process is adjusted on a page by page basis.

13. (Previously Presented) The method as claimed in claim 9, further comprising:
adjusting a timing of a transition event executed by the printing system when the length of the trailing edge non-image zone exceeds the predetermined value.

14. (Previously Presented) The method as claimed in claim 13, wherein the timing of the transition event is adjusted on a page by page basis.

15. (Previously Presented) A method for managing a size of an inter-document zone in a printing system having an imaging subsystem and a recording medium transport subsystem, comprising:

identifying a leading edge non-image zone of an electronic image to be rendered, the electronic image to be rendered having a plurality of scanlines, each scanline containing a plurality of pixels of image data, the leading edge non-image zone being a portion the electronic image from a first scanline of the electronic image to a scanline of the electronic image immediately preceding a scanline of the electronic image having first renderable image data;

determining a length of the leading edge non-image zone, the length being orthogonal to a direction of a scanline of the electronic image;

comparing the length of the leading edge non-image zone to a predetermined value; and

adjusting a timing of a recoding medium delivery process executed by the recording medium transport subsystem when the length of the leading edge non-image zone exceeds the predetermined value.

16. (Previously Presented) The method as claimed in claim 15, wherein the timing of the recoding medium delivery process is adjusted on a page by page basis.

17. (Previously Presented) The method as claimed in claim 15, further comprising:

identifying a trailing edge non-image zone of an electronic image to be rendered, the trailing edge non-image zone being a portion the electronic image from a last scanline of the electronic image to a scanline of the electronic image immediately following a scanline of the electronic image having last renderable image data; and

adjusting a timing of a recoding medium delivery process executed by the recording medium transport subsystem when the length of the trailing edge non-image zone exceeds the predetermined value.

18. (Previously Presented) The method as claimed in claim 17, wherein the timing of the recoding medium delivery process is adjusted on a page by page basis.

19. (Previously Presented) The method as claimed in claim 17, further comprising:

adjusting a timing of a transition event executed by the printing system when the length of the trailing edge non-image zone exceeds the predetermined value.

20. (Previously Presented) The method as claimed in claim 19, wherein the timing of the transition event is adjusted on a page by page basis.